



United States Department of Agriculture
Forest Service

South Crazy Mountains Land Exchange

Preliminary Environmental Assessment

Custer Gallatin National Forest, Yellowstone Ranger District, Park and Sweet Grass Counties, Montana
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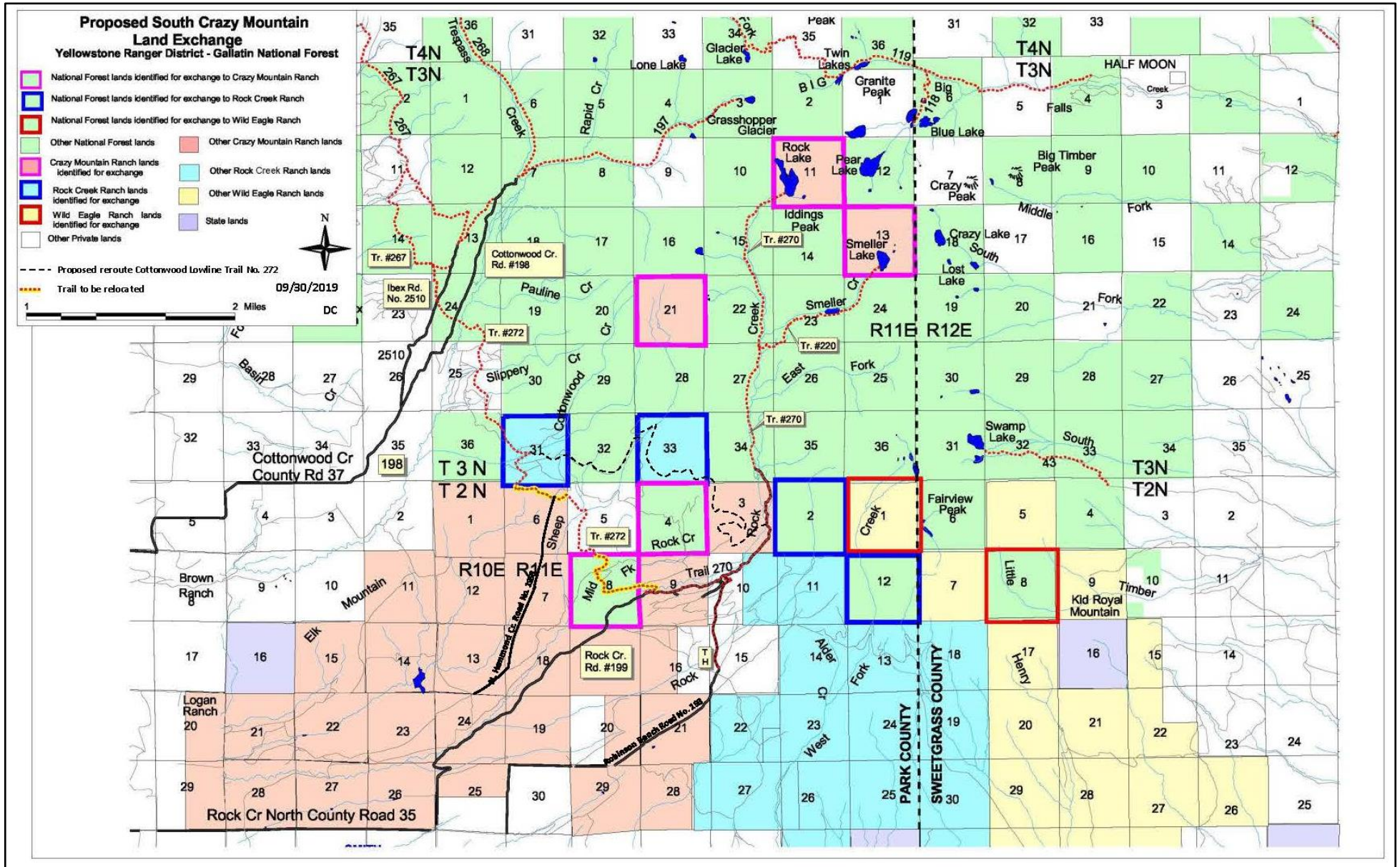
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Figure 1. Map displaying the proposed South Crazy Mountain land exchange Federal and non-Federal parcels



Section 1: Introduction

1.1 Introduction

The purpose of this preliminary environmental assessment is to disclose and document the anticipated environmental effects of the proposed South Crazy Mountains Land Exchange and to seek public comment on the proposal (Figure 1). The proposed action is to exchange approximately 3,225 acres of National Forest System (NFS) lands for approximately 3,797 acres of non-Federal lands located in south central Montana, northeast of Livingston and northwest of Big Timber. The non-Federal lands are currently owned by three separate private entities, Philip Morris USA, Inc. (Crazy Mountain Ranch (CMR)), Rock Creek Ranch I, Ltd. (RCR), and Wild Eagle Mountain Ranch LLC (WEMR).

The anticipated benefits of this proposed land exchange include:

- Creating a large block of clearly identifiable consolidated, NFS lands for public use and benefit;
- Acquiring Rock Lake and Smeller Lake to provide for quality recreational opportunity including fishing, hiking, hunting, camping and scenic viewing;
- Securing habitat at Rock Lake and Smeller Lake for Yellowstone cutthroat trout
- Securing a permanent trail easement and the relocation and construction of large portions of the Cottonwood Lowline Trail #272 onto the consolidated NFS lands;
- Securing a permanent road easement on the Robinson Bench Road No.193 to provide public access to the Rock Creek North trailhead;
- Securing a permanent administrative easement for the Rock Creek Road No. 199 and North Hammond Creek Road No. 1958, which will provide access for the agency to enhance resource management including wildfire response, weed control, permit administration, or other restoration activities on NFS land; and
- Consolidation of NFS lands, resulting in management efficiency including reduction of boundary line maintenance, signage, and other authorizations.

For this analysis the current NFS lands proposed for exchanged will be referred to as “Federal lands” and the current private lands will be referred to as “non-Federal lands”. Detailed legal land descriptions can be found for both the Federal and the non-Federal lands within section *1.4 Lands Considered for Exchange*. For the purposes of the document all legal descriptions used herein are located in Principal Meridian Montana.

The United States Forest Service is considering this proposal under the authorities of the General Exchange Act of March 20, 1922 (P.L. 67-173; 42 Stat. 465; 16 U.S.C. 485, 486), as amended by the Federal Land Policy and Management Act of October 21, 1976 (FLPMA) (P.L. 94-579; 90 Stat. 2743 43 U.S.C. 1715-1717), and the Federal Land Exchange Facilitation Act of August 20, 1988 (P.L. 1000-409; 102 Stat. 1086; 43 U.S.C 1716).

This analysis complies with the National Environmental Policy Act of 1969, as amended [42 USC 4321–4347] (NEPA), the National Forest Management Act (NFMA), the Council of Environmental Quality regulations (CEQ), and Forest Service regulations 36 CFR 220.4. This analysis is not intended to serve as a land or resource management document for the Custer Gallatin National Forest.

The Forest Service will evaluate the elements of the three separate proposed land exchanges, as one exchange proposal for environmental analysis purposes. The respective Federal and non-Federal lands in each component will be appraised and exchanged as separate transactions between each landowner and the United States.

1.2 Background

The Crazy Mountains are an isolated mountain range surrounded by broad valleys and rolling hills dominated by large cattle ranches and private recreational retreats. This mountain range is known for steep jagged peaks, rugged terrain, scenic vistas, and are generally roadless in character, with minimal development and relatively few roads. The lower elevation lands consist of a mosaic of forest lands, aspen and open grasslands on gentle slopes. These lower elevation lands are productive for wildlife habitat and livestock grazing. The higher elevation lands are mostly steep, rocky and deeply carved by past glacial actions.

Native Americans, particularly the Crow Tribe, consider the Crazy Mountains to have historic and sacred values, especially the high peaks. The Crazy Mountains were first proclaimed a Forest Reserve in 1906. Much of the landownership in the Crazy Mountains is in a "checkerboard" pattern, resulting from past railroad grants. The railroad sections (odd-numbered) were subsequently sold to private ranches decades ago by Northern Pacific Railway Company.

Given the checkerboard ownership pattern, public and administrative access to NFS lands is currently limited into the Crazy Mountains. There is (generally) no public road access to the NFS lands in the southern part of the Crazy Mountains with the exception of Cottonwood Road No.198 on the west side and Big Timber Canyon Road No.197 on the east side. It is feasible, although difficult, for people to access the NFS lands in the southern parts by foot or stock by starting from either Cottonwood Road, Big Timber Canyon Road, or the Rock Creek Trail No. 270 in Township 2 North, Range 11 East, section 15.

For the past eighty-five years, the Forest Service has been working with private landowners and conservation partners in the Crazy Mountains to acquire the intermingled private lands by purchase or exchange in an effort to consolidate NFS lands, and to improve road and trail access to public lands in the Crazy Mountains. Past notable land exchanges, land purchase, and road easements total 38,915 acres and include:

Land Exchanges

- 1934/37, F.W. McReynolds (2 exchanges: 637 acres and 1,105 acres)
- 1940, Jacob Johnson (2,551 acres)
- 1947, Northern Pacific Railway Co. (3,120 acres)
- 1950, Raymond Criswell (3,829 acres)
- 1985, Sharon Cochran (634 acres)
- 1999, Spear Lazy U Ranch (1,076 acres) plus donation of 227.5 acres
- 2007, Muffie Murray (160 acres) plus donation of 248.6 acres

Road Access

- 1953/54, Big Timber Creek Road (result of litigation regarding public access)
- 1956, Shields River Road No. 844
- 1967, Forest Lake Road No. 66
- 1974, Ibex Road No. 2510

Land Purchases

- 1975, The Nature Conservancy (4,574 acres)
- 1991-93, Louise R. Galt/71 Ranch (38,916 acres) completed in 3 phases with 6 purchases

1.3 Need for Action

There is a desire to consolidate Federal land ownership in the southern Crazy Mountains for the following purposes:

-
1. To provide for more effective and efficient management of consolidated lands;
 2. The relocation and construction of large portions of the Cottonwood Lowline Trail #272 onto NFS lands and the acquisition of a trail easement to provide connectivity with the Rock Creek Trail and the consolidated NFS lands;
 3. To secure Rock Lake and Smeller Lake to provide for quality recreational opportunity including fishing, hiking, hunting, camping and scenic viewing;
 4. To acquire access on the Robinson Bench Road No.193, through sections 20, 21 and 22, to the Rock Creek North trailhead;
 5. Secure administrative road access on Rock Creek Road No. 199 and North Hammond Creek Road No. 1958 to access NFS lands for weed treatment, vegetation restoration, permit administration and fire protection;
 6. To provide habitat at Rock Lake and Smeller Lake for Yellowstone cutthroat trout; and
 7. To conserve wildlife habitat by eliminating the potential for development of private interior undeveloped sections.

1.4 Lands Considered for Exchange

The proposed South Crazy Mountains Land Exchange involves the following Federal and non-Federal lands located in Park County, and one Federal parcel in Sweet Grass County. All lands described below are located within Principal Meridian, Montana.

Crazy Mountain Ranch (CMR) component:

Federal lands:

Township 2 N., Range 11 E., Sections 4 and 8

Totaling 1,305.58 acres

Non-Federal lands:

Township 3 N., Range 11 E., Sections 11, 13 and 21

Totaling 1,920 acres

Rock Creek Ranch (RCR) component:

Federal lands:

Township 2 N., Range 11 E., Sections 2 and 12

Totaling 1,280 acres

Non-Federal lands:

Township 3 N., Range 11 E., Sections 31 and 33

Totaling 1,237.48 acres

Wild Eagle Mountain Ranch (WEMR) component:

Federal lands:

Township 2 N., Range 12 E., Section 8 (Sweet Grass County)

Totaling 640 acres

Non-Federal lands:

Township 2 N., Range 11 E., Section 1

Totaling 640 acres

TOTAL Federal lands: 3,225.58 acres (approx.)

TOTAL Non-Federal lands: 3,797.48 acres (approx.)

1.5 Decision Framework

The Forest Supervisor of the Custer Gallatin National Forest is the responsible official who will determine if the proposed activities will have a finding of no significant impact (FONSI), based on the environmental assessment and public comments. The Forest Supervisor's decision would then be documented in a Decision Notice. The Decision Notice will include rationale for the alternative selected.

The decision to be made is whether to retain the lands currently under Federal ownership and Forest Service management (Alternative A- No Action) or authorize the proposed land exchange (Alternative B- Proposed Action) and related provisions as proposed. The decision will address specific components of the proposed action, including:

- Lands to be included in the exchange;
- Water rights to be transferred;
- Mineral rights to be conveyed;
- Future Forest Plan management of current non-Federal lands;
- Operation and maintenance of Rock Lake Dam;
- Livestock grazing permits and leases;
- Fences, roads, irrigation equipment and other improvements;
- Administrative use (through easement acquisition) for Rock Creek Road No. 199 and North Hammond Creek Road No. 1958;
- Easement for public use of Robinson Bench Road; and
- Relocation (and easement acquisition for public use) of portions of Cottonwood Lowline Trail No. 272.

Federal Regulations

Basic authorities for this proposed land exchange are the General Exchange Act of March 20, 1922 (P.L. 67-173; 42 Stat. 465; 16 U.S.C. 485, 486), as amended by the Federal Land Policy and Management Act (FLPMA) of October 21, 1976 (P.L. 94-579; 90 Stat. 2743; 43 U.S.C. 1715-1717) and the Federal Land Exchange Facilitation Act of August 20, 1988 (P.L. 100-409; 102 Stat. 1086; 43 U.S.C. 1716).

The Federal Land Policy and Management Act of 1976, as amended, Section 206, requires that the value of exchanged lands be equal, but the exchange can be adjusted for any difference in value by cash equalization payments of up to 25% of the value of the Federal lands.

Land exchange regulations for the USDA Forest Service are set at 36 CFR, part 254, subpart A. Forest Service Manual 5403 and 5430.3 give direction concerning Forest Service policies regarding land exchanges. Agency policy and general guidance for land exchange processes are also located in Forest Service Handbook 5409.13, chapter 30. This proposed land exchange will follow Forest Service policy including:

- Forest Service Manual (FSM) 5430.2: the objective of the land exchange program is to utilize land exchanges as a tool, in concert with the purchase program, to implement Forest land and resource management planning and direction; to optimize NFS land ownership patterns; to further resource protection and use; and to meet the present and future needs of the American people.
- Complete land exchanges to consolidate NFS and private, state, or local government land patterns, to permit needed urban or industrial expansion; or to make other adjustments in landownership clearly in the public interest FSM 5403.1(5).
- Achieve the optimum landownership pattern to provide for the protection and management of resource uses to meet the needs of the nation now and in the future (FSM 5402.1).

Forest Plan Consistency

This environmental assessment tiers to, and incorporates by reference, the Gallatin National Forest Land and Resource Management Plan Final Environmental Impact Statement (FEIS) and follows the Gallatin National Forest Land and Resource Management Plan (Forest Plan) 1987, as amended. The Forest Plan provides criteria for lands to be considered for exchange and acquisition.

The proposed action is consistent with objectives, desired conditions, and criteria for lands offered by the U.S. for exchange and acquisition in the Forest Plan. Goals that specifically apply to the purposes of this proposed action are:

- Maintain and enhance fish habitat to provide for an increased fish population;
- Provide habitat for viable populations of all indigenous wildlife species and for increasing populations of big game animals; and
- Provide additional secured public access to NFS lands.

The Forest plan details objectives to ensure that forest wide goals can be met. **Objective k. Landownership** states that landownership adjustments will be considered where analysis indicates they will be advantageous to the public (Forest Plan, Chapter 2 pg. 5). The Forest Plan also establishes priorities for the acquisition of private lands to meet the landownership objective of the Forest Plan (Forest Plan, Chapter 2 pg. 27):

- a) designated wilderness;
- b) key wildlife habitat;
- c) tracts that improve National Forest access, resolve administrative concerns and reduce administrative costs;
- d) tracts in major recreation composites;
- e) other key recreation tracts; or
- f) other;

The Forest Plan provides guidance for management of specific land areas, referred to as Management Areas (MA). The Forest Service is currently working on a revised Forest Plan for the Custer Gallatin National Forest. Until the Forest Plan revision is completed, the non-Federal lands proposed to become NFS lands would be managed consistently with adjacent NFS lands. The current Forest Plan designates primarily MA 6 and MA 10 for the NFS lands surrounding the non-Federal lands.

MA 6 contains generally large blocks of undeveloped land with a trail system and few roads passing through and provides a wide variety of opportunity for dispersed recreation. The management goals for MA 6 are to provide for a wide variety of dispersed recreational opportunities and to provide for additional public access to the area. (Forest Plan, Chap. 3 pg. 24)

MA 10 contains open grasslands which provide forage for livestock interspersed with suitable timber lands. The management goals for MA 10 are to maintain healthy stands of timber, improve range management to optimize livestock grazing, and use timber harvest to create transitory livestock range. (Forest Plan, Chapter 3 pg. 41)

Section 2: Proposed Action and Alternative

The alternatives in this preliminary environmental assessment were developed to respond to the need for action (Section 1.3).

2.1 Alternative A- No Action

This alternative represents reasonably foreseeable conditions that would be expected in the absence of the proposed land exchange. Under Alternative A, the Forest Service, CMR, RCR, and WEMR would not exchange lands. The existing landownership pattern would remain in the conditions detailed in section 1.4.

2.2 Alternative B- Proposed Land Exchange

Federal lands and associated interests, detailed in section 1.4, would be exchanged with non-Federal lands and associated interests, also detailed in section 1.4. By mutual agreement between the Forest Service and the landowners, documented in the Agreement to Initiate, each component of the South Crazy Mountains Land Exchange will be completed on an equal value basis (as required by FLPMA, Section 206).

Elements of the Proposed Action

Land Donation and Cash Equalization

The land exchange will be completed on an equal value basis. If the final appraisals indicate the value of the non-Federal lands exceeds the value of the Federal lands, the landowners could:

1. Voluntarily offer to donate any additional non-Federal lands to the U.S. in a separate Donation Deed;
2. Receive a cash equalization payment; or
3. Reduce the amount of non-Federal land conveyed to the United States.

If the final appraisals indicate the value of the Federal land exceeds the value of the non-Federal lands, the Forest Service could:

1. receive a cash equalization payment; or
2. Reduce the amount of Federal land conveyed to private ownership.

Minerals

The landowners (who own their minerals) intend to convey all minerals associated with the non-Federal lands to the United States. The Forest Service intends to convey all minerals rights associated with the Federal lands to the landowners.

CMR lands

Title evidence for the CMR lands indicates that CMR owns the mineral estate for Section 21. However, title evidence shows that numerous mineral deeds of record, dated from 1936 to 2014, affect title to two of the three CMR parcels. Section 11 has 55 mineral owners and Section 13 has 51 mineral owners. The Minerals Potential Report indicates low potential for occurrence and development of locatable minerals, oil and gas, geothermal and coal on all of the non-Federal parcels. While sand and gravel deposits likely exist on the non-Federal parcels, difficult access and existing local sources make development of new sources unlikely.

RCR lands

Title evidence for the RCR lands indicates there are no severed minerals estates. RCR owns and

will convey the mineral estate for the two offered parcels (Sections 31 and 33) to the United States.

WEMR lands

Title evidence shows that a portion of the mineral estate for WEMR's offered parcel (Section 1) is fractionalized. Title evidence shows that Section 1 has 12 mineral owners.

WEMR agrees to diligently pursue the acquisition of the outstanding mineral interests in Section 1 for conveyance to the United States. If WEMR is unable to convey the full mineral estate, the Forest Service may elect to reserve all or certain portions of the Federal mineral estate.

Water Rights

The Forest Service Handbook (FSH) directs that a water rights analysis be completed to address ground or surface water rights associated with the Federal and non-Federal lands (FSH 5409.13, 32.45). This analysis is summarized within this document and can be obtained from the project record upon request.

Federal Lands

Water rights held by the Forest Service proposed for transfer to CMR in the exchange. The following water rights exist on the Federal lands:

- Claim No. 43A 60620 00 – Spring with a use right for stock in an unnamed tributary of Middle Rock Creek
- Claim No. 43A 60621 00 – Spring with a use right for stock in an unnamed tributary of Middle Rock Creek
- Claim No. 43A 60616 00 – Surface water with a use right for stock in the Middle Fork Rock Creek

CMR Lands

Water rights held by CMR would be transferred to the Forest Service in the exchange. The following water rights exist on the non-Federal lands:

- Claim No. 43A 191992 00 – use right for recreation in Smeller Creek
- Claim No. 43A 191993 00 – use right for recreation in Smeller Lake
- Claim No. 43A 192033 00 – use right for stock from Smeller Lake
- Claim No. 43A 192034 00 – use right for stock from Smeller Creek

Water Rights Reserved by CMR (storage of irrigation water in Rock Lake):

- Claim No. 43A 40463 00
- Claim No. 43A 40464 00
- Claim No. 43A 40465 00

Certain third party irrigation water rights at Rock Lake, owned by other parties not involved in the exchange, will remain in private ownership.

Federal Lands

Water rights held by the Forest Service would be transferred to RCR in the exchange. The following water rights exist on the Federal lands:

- Claim No. 43A 60617 00 – use right for stock from Little Rock Creek

RCR Lands

Water rights held by RCR would be transferred to the Forest Service in the exchange. The following water rights exist on the non-Federal lands:

- Claim No. 43A 37098 00 – use right for stock from Little Cottonwood Creek
- Claim No. 43A 37099 00 – use right for stock from Sheep Creek

Rock Lake Dam and Ditches

CMR will permanently reserve rights to operate and maintain the Rock Lake dam and outlet tunnel in the deed through which CMR conveys Section 11 to the Forest Service. This deed reservation would be subject to the applicable federal regulations (36 CFR 251.17 and 36 CFR 251.19). CMR will continue to be fully responsible to operate and maintain the reserved facilities on NFS lands and pay for any associated costs. The Forest Service and CMR would develop and enter into a detailed Operation and Maintenance Plan for these facilities. CMR would retain its water rights for the volume of water from full pool to the bottom of the outlet tunnel.

After the exchange, the Forest Service and State of Montana would have the right to inspect and monitor the dam and outlet tunnel in the future, to ensure public safety.

Livestock Grazing Permits and Leases

Federal Lands

The proposed exchange lands encompass five Forest Service grazing allotments: Little Cottonwood, Rock Creek North, Middle Fork of Rock Creek, Duck Creek and Little Timber. Combined, these allotments consist of approximately 12,020 acres (8,698 acres of NFS lands and 3,322 acres of private lands). Six permits have been issued to graze cattle on these allotments. One permit was waived back to the Forest Service and two permits will not be affected by this exchange. The remaining three grazing permittees affected by this proposed exchange were notified, in writing (August 20, 2019) by the Forest Service. By law, the permit holders may reserve grazing privileges on NFS lands for two years from date of written notice, or they may elect to waive the right to reserve (36 CFR 222.4(a)(1)).

Non-Federal Lands

There are no private grazing agreements (leases or permits) on the non-Federal lands identified for exchange. The landowners do not intend to reserve grazing rights. Lands identified as suitable¹/capable that are added to the NFS in the exchange may be made available for livestock grazing. Those decisions will be made by the authorized officer.

Fences, Roads, Irrigation Ditches, and Other Improvements

Fences, low standard roads, trails, irrigation ditches and other improvements are known to exist on the non-Federal and Federal lands identified for exchange. The Forest Service and landowner(s) agree to accept title to the lands knowing fences, low standard roads, trails, irrigation ditches and other improvements may exist.

Hazardous Materials

Prior to closing the exchange, a records search and field inspection to determine if there is any evidence that hazardous or potentially hazardous substances (“HAZMAT”) have been used, stored, released, or disposed of on the Federal lands and the non-Federal lands considered for exchange. Any party may elect, prior to closing, to discontinue the exchange process if

¹ Forest Service Handbook 2209.14 - Service-wide Range Analysis and Management Handbook

HAZMAT substances are discovered on their lands.

Before the exchange is completed, CMR will remove the barrels and other discarded materials located near and below the Rock Lake Dam, at CMR's expense.

Forest Plan Management Area Designation

CMR lands Township 3 N., Range 11 E., Sections 11, 13 and 21, as well as, WEMR lands Township 2 N., Range 11 E., Section 1, would be designated as Management Area (MA) 6. RCR lands Township 3 N., Range 11 E., Sections 31 and 33, would be designated as MA 10. Section 1.5 Decision Framework contains details about MA 6 and 10.

Recreation Opportunity Spectrum Designation

CMR lands Township 3 N., Range 11 E., Sections 13 and 21, as well as, WEMR lands Township 2 N., Range 11 E., Section 1, would be designated as Semi-Primitive Non-motorized (SPNM). SPNM lands are managed for non-motorized use. Uses include hiking and equestrian trails, mountain bikes and other non-motor mechanized equipment. These lands would also be identified as unsuitable for timber harvest.

CMR lands Township 3 N., Range 11 E., Section 11 and RCR lands Township 3 N., Range 11 E., Sections 31 and 33, would be designated as Semi-Primitive Motorized (SPM). SPM lands are backcountry areas used primarily by motorized users on designated routes. Roads and trails are designed for off-highway and high-clearance vehicles.

Travel Plan Area Designation

CMR lands Township 3 N., Range 11 E., Sections 11, 13 and 21, as well as, WEMR lands Township 2 N., Range 11 E., Section 1, would be designated within the East Crazies Travel Planning Area. RCR lands Township 3 N., Range 11 E., Sections 31 and 33, would be designated within the Porcupine Ibex Travel Planning Area.

Roads and Trails

Robinson Bench Road No. 193

As a provision of the exchange, CMR and RCR will grant and donate permanent public road easements to the United States for those portions of the existing Robinson Bench Road across CMR lands in Section 20 (East half) and Section 21 and RCR lands in Section 22. The public road easements to the United States will eliminate an apparent gap in the recorded easements for Robinson Bench Road. Once the Robinson Bench Road enters private property in Section 15, it is then known as the Rock Creek North Road which terminates at the Rock Creek Trailhead parking area. The United States also holds permanent easements for this portion of road, as well as the trailhead parking area and trail, all of which provide for permanent public access to the Rock Creek Trail in sections 10 and 15, T. 2 N, R 11 E.

Cottonwood Lowline Trail No. 272

There are no recorded easements for the Cottonwood Lowline Trail No. 272 in its existing location across private land from Cottonwood Creek to the intersection of Rock Creek Road No. 199 in section 9, T. 2N, R. 11E. As a provision of the exchange, the Forest Service and CMR would jointly relocate portions of the Cottonwood Lowline Trail No. 272. The new portion of Trail No. 272 would be north of the existing location, classified as a level 3 trail suitable for pedestrian, stock, and mountain bike use. This relocation is designed to reduce the amount of NFS trail on private (CMR) lands, while providing a reasonable connection for public access

between Cottonwood Creek and Rock Creek Trail No. 270 (Figure 2). From the Rock Creek Trailhead in Section 15, visitors would head north to section 3 in which they would continue north on Rock Creek Trail No. 270 or west on the proposed Cottonwood Lowline Trail No. 272, spending less time on private land and more time on NFS lands.

A location for the proposed relocation of portions of Cottonwood Lowline Trail No. 272 has been identified, mapped and tentatively agreed upon by Forest Service and CMR. CMR will complete the actual trail building or provide up to \$75,000 to the Forest Service to build the trail. CMR agrees to grant, and the United States agrees to accept, a USDA Trail Easement on the proposed replacement location for Cottonwood Lowline Trail #272, crossing approximately 2.4 miles of CMR land in Section 3, T2N., R11E. Reference Figure 2.

Rock Creek Road No. 199

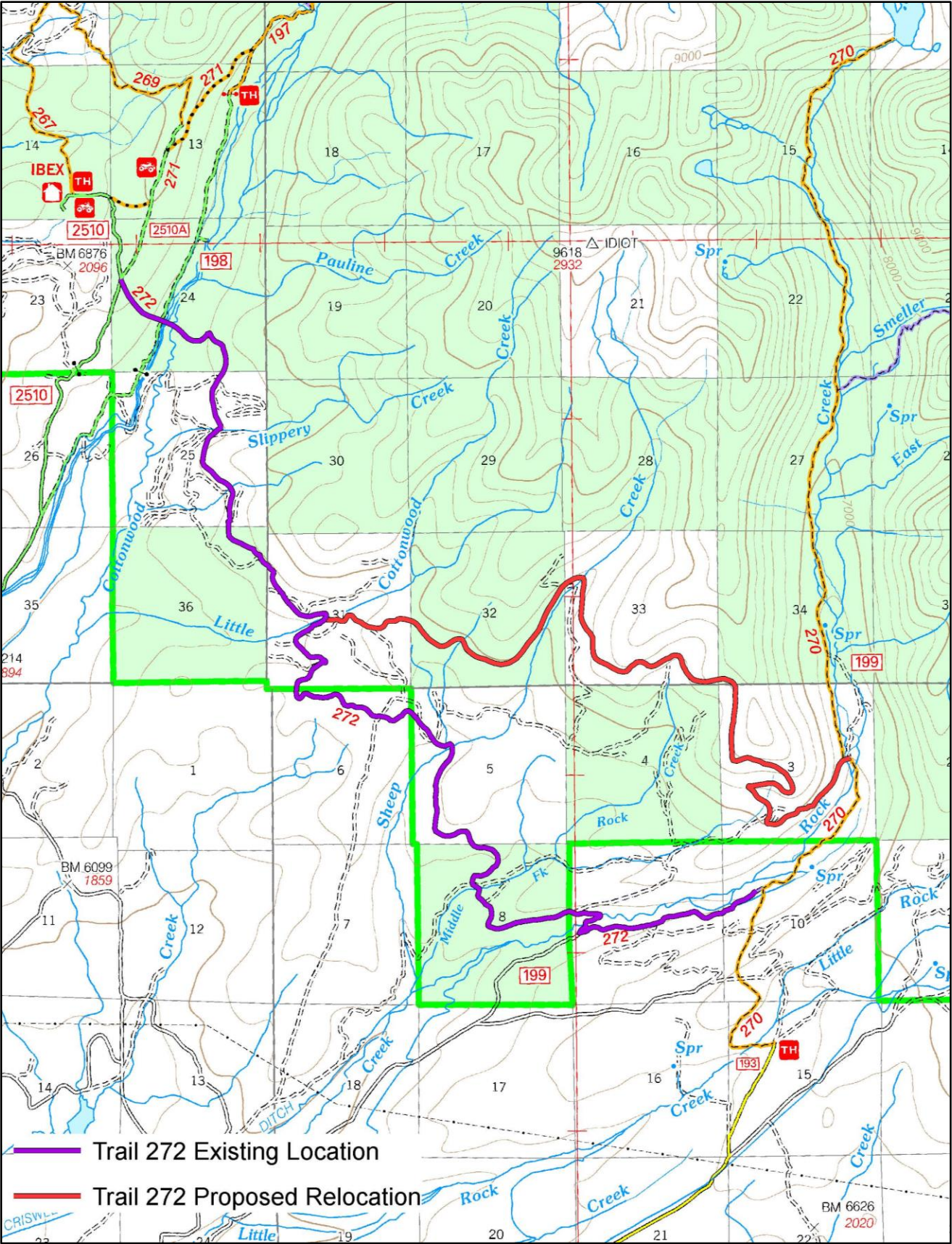
The United States currently holds easements for the existing Rock Creek Road No. 199 across Sections 3, 9 and 10, T.2 N., R.11 E. As a provision of the exchange, CMR will grant and donate road easements to the United States for those portions of Rock Creek Road No. 199 from the Rock Creek County Road No. 35 across their respective private lands, including within Section 24, T.2 N., R.10 E., and Sections 8 (post-exchange), 17, 18, and 19, T.2 N., R.11 E. The easements will authorize the Forest Service, authorized contractors, permittees, and cooperators, permanent administrative (not public) use of existing Road No. 199, to provide motorized access to the NFS lands in the Rock Creek drainage.

CMR will also assign their Easement Deed for Rock Creek Road No. 199 to the United States located at NW¹/₄ NE¹/₄ Section 10, T.2 N., R.11E., recorded at Book 164 and Page 1109.

North Hammond Creek Road No. 1958

As a provision of the exchange, CMR will grant and donate a permanent administrative road easement to the United States for those portions of North Hammond Creek Road No. 1958 from the Rock Creek County Road No. 35 across their respective private lands, including within Section 13, T.2 N., R.10 E. and Sections 6, 7 and 18, T.2 N., R.11 E. The easements will authorize the Forest Service, authorized contractors, permittees, and cooperators, permanent administrative (not public) use of the existing Road No. 1958 to provide motorized access to NFS lands.

Figure 2- Current location and proposed relocation of portions of Lowline Trail No. 272 tentatively agreed upon by Forest Service and CMR.



Voluntary Conservation Easements

At closing of the exchange, each of the three landowners (CMR, RCR, and WEMR) have agreed to voluntarily place a Conservation Easement on the Federal lands to be conveyed into private ownership. The Conservation Easement (CE) would need to be held by a qualified non-profit conservation organization in the state of Montana.

The CE would continue to provide for traditional land uses including recreation, livestock grazing, and timber management. The CE would preclude all mineral development and mining (hard rock and oil/gas) and preclude residential, industrial, or commercial development, except one new recreation cabin which may be built and maintained on the land protected by the CE. The executed CEs would be filed for the record with the Clerk and Recorder in Park County, and Sweet Grass County, Montana.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

Sometimes alternatives are suggested or proposed that do not adequately respond to the purpose and need for action, are technically or economically infeasible, are speculative, or would have substantially similar effects as an existing alternative. In such cases, the alternatives are usually eliminated from detailed analysis.

Direct Purchase

Forest Service policy for land exchanges requires consideration of a direct purchase alternative (FSH 5409.13). This alternative was considered, but not evaluated in detail. CMR, RCR, and WEMR were not interested in selling land to the Forest Service, only in exchanging the non-Federal lands for the Federal lands located within, and adjacent, to their private lands.

No other alternatives were considered, since the Proposed Action fully addresses the purpose and need for action. Currently no other action is available to the Forest Service to meet the purpose and need.

Section 3: Environmental Effects

This section summarizes the potential effects of the proposed action on specific resources. The detailed proposed action within section 2.2, provides specifics of the current conditions for many resource areas for both the Federal and non-Federal lands, as well as, indicates what the effects of selecting the proposed action would have on those resources.

For numerous resources, Alternative A- No Action, is the same as the current condition. Without implementing the proposed land exchange the current condition would continue as it is now. The No Action Alternative serves as a baseline for which to compare Alternative B- Proposed Action, against.

3.1 Recreation Uses and Access

Dispersed Recreation

Federal Lands

There are no inventoried dispersed campsites within the Federal parcels and dispersed overnight camping is not common. Access into these parcels is difficult due to terrain and having to cross private property. Dispersed recreation primarily consists of day use big game hunting, fishing, hiking, backpacking and wildlife viewing. Winter use is minimal as there is limited snowmobile terrain and many of the roads in the area have seasonal restrictions.

Non-Federal Lands

The non-Federal parcels offer a variety of recreational opportunities such as; hiking, wildlife viewing, fishing and hunting opportunities. There are two high-elevation mountain lakes, Smeller and Rock Lake, in the non-Federal parcels. These lakes provide fishing and dispersed recreation camping opportunities, though there is only permissive access to the lakes at this time.

Roads and Trails

Federal Land

Cottonwood Lowline Trail No. 272

As a provision of the exchange, the Forest Service and CMR would jointly relocate portions of the Cottonwood Lowline Trail No.272. The new portion of Trail No.272 would be north of the existing location, classified as a level 3 trail suitable for pedestrian, stock, and mountain bike use. There are no recorded easements for the Cottonwood Lowline Trail No. 272 in its existing location across private land from Cottonwood Creek to the intersection of Rock Creek Road No. 199 in section 9, T. 2N, R. 11E. Table 1 describes the trails and roads within the proposed land exchange areas (Federal and non-Federal lands).

Rock Creek Road No. 199 currently crosses through a Federal parcel in Section 8, T. 2 N., R. 11 E., in which the United States will retain administrative access.

Non-Federal Lands

Robinson Bench Road No. 193

As a provision of the exchange, CMR and RCR will grant and donate permanent road easements to the United States for those portions of the existing Robinson Bench Road across CMR lands in Section 20 (East half) and Section 21 and RCR lands in Section 22. The Road Easements to the United States will eliminate an apparent gap in the recorded easements for Robinson Bench Road. Once the Robinson Bench Road enters private property in Section 15, it is then known as the Rock Creek North Road which terminates at the Rock Creek Trailhead parking area. The United States also holds permanent easements for this portion of road, as well as the trailhead parking

area and trail, all of which provides for permanent public access to the Rock Creek Trail in sections 10 and 15, T. 2 N., R. 11 E.

Rock Creek Road No. 199

The United States currently holds easements for the existing Rock Creek Road No. 199 across Sections 3, 9 and 10, T.2 N., R.11 E. As a provision of the exchange, CMR will grant and donate road easements to the United States for those portions of Rock Creek Road No. 199 from the Rock Creek County Road No. 35 across their respective private lands, including within Section 24, T.2 N., R.10 E., and Sections 8 (post-exchange), 17, 18, and 19, T.2 N., R.11 E. The easements will authorize the Forest Service, authorized contractors, permittees, and cooperators, permanent administrative (not public) use of existing Road No. 199, to provide motorized access to the NFS lands in the Rock Creek drainage.

North Hammond Creek Road No. 1958

As a provision of the exchange, CMR will grant and donate a permanent administrative road easement to the United States for those portions of North Hammond Creek Road No. 1958 from the Rock Creek County Road No. 35 across their respective private lands, including within Section 13, T.2 N., R.10 E. and Sections 6, 7 and 18, T.2 N., R.11 E., The easements will authorize the Forest Service, authorized contractors, permittees, and cooperators, permanent administrative (not public) use of the existing Road No. 1958 to provide motorized access to NFS lands.

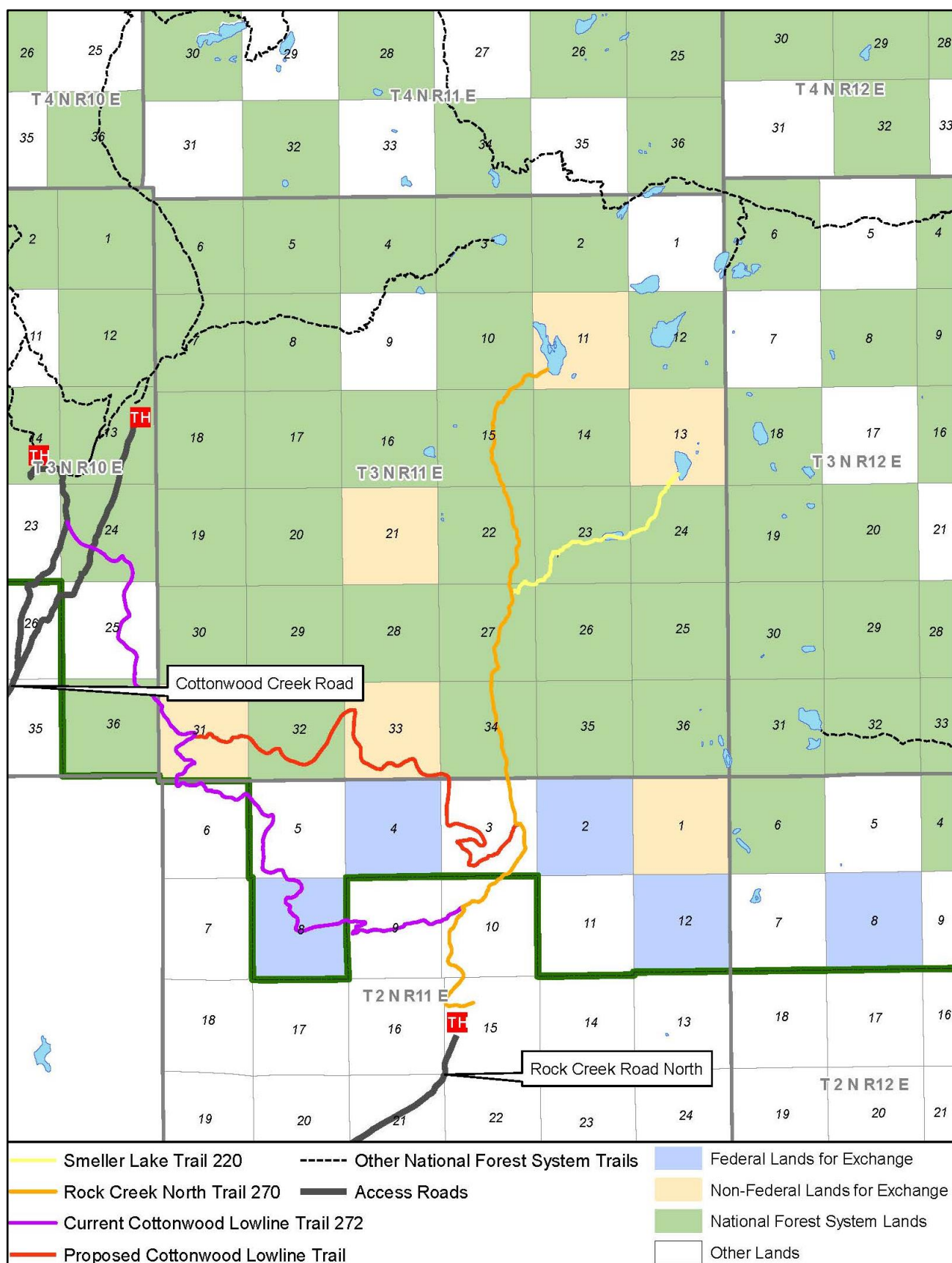
Table 1. Roads and trails, season of use, designed use, and trail class found within the proposed South Crazy Mountains land exchange.

Trail/Road Name and Number	Season of use/ seasonal restrictions to motorized vehicles	Designed Use	Trail Class² /Maintenance Level
Existing Cottonwood Lowline Trail No.272	Year round	Foot/stock/bicycles	Trail Class 2
Rock Creek Trail No.270	6/16-10/14	Foot/stock/bicycles/ motorcycles	Trail Class 3
Smeller Lake Trail No.220	Year round	Foot/stock/bicycles	Trail Class 3
Ibex Road No.2510*	5/16-12/31	All wheeled vehicles	Operational Maintenance Level 3

**Roads open to highway legal vehicles only, with seasonal designation.*

² FSH 2309.18 – Trails Management Handbook, Chapter 10 Trail Planning: Trail Class identified for a National Forest System trail prescribes its development scale, representing its intended design and management standards.

Figure 3. Roads, trails, and proposed relocation of the Lowline Trail within the proposed land exchange areas (Federal and non-Federal lands)



Special Use Authorizations for Outfitting and Guiding

There are three outfitter/guides that are authorized to operate on the Federal lands in this area. If the proposed exchange should proceed, the authorizations for these outfitter/guides will be amended to remove the Federal parcels from their authorized areas and potentially, add the non-Federal lands to their permitted areas. Currently, these outfitter/guides are not authorized to operate on the non-Federal parcels.

Hunting/Big Game Management Units

Montana Fish Wildlife and Parks (MFWP) offer hunting opportunities on public lands in this area as part of their management of big game. The proposed land exchange lies within big game management units for deer and elk (unit 315), antelope (unit 339), black bear (unit 580), moose (unit 303), mountain goat (unit 313), and mountain lion (unit 315). The area is popular during bow and rifle seasons in late summer and fall, with one permitted outfitter offering spring bear hunts.

Developed Recreation

There are no developed recreation sites within either the Federal or non-Federal lands proposed for exchange.

Effects of Alternative A- No Action

The Cottonwood Lowline Trail No.272 would remain in its current location and the United States would not have recorded easements for this trail. The public would continue to rely on permissive use of CMR lands at Rock Lake and Smeller Lake. Access to the Rock Creek Trailhead would not be secured. This alternative would not change current permitted uses by outfitters and guides and MFWP would continue to offer hunting opportunities in this area as part of their management of big game.

Effects of Alternative B- Proposed Action

If the land exchange is completed, public access would become available for dispersed recreation, including hunting, fishing, hiking, horseback riding, and wildlife viewing on the acquired lands. Some of the acquired lands would provide opportunity for mountain biking and motorcycle riding on existing system trails. The proposed exchange would provide public access to two high elevation mountain lakes, Smeller and Rock Lake, which are currently inaccessible to the public. The acquired parcels would provide opportunity for dispersed camping. Winter motorized recreation would improve with the land exchange by providing some additional terrain adjacent to sections that are currently open to snowmobiles.

The proposed exchange would secure public access on the Robinson Bench Road No.193, the Cottonwood Lowline Trail No.272 in an improved location, and access to Rock Lake, and Smeller Lake. Alternative B will provide access to large blocks of NFS lands that remain intact for remote and undeveloped recreational pursuits.

Alternative B will improve access and could increase recreational opportunities for the three permitted outfitter/guides that operate in this area. Permitted activities that could be positively affected by acquiring these lands include horseback riding, fishing, and hunting.

MFWP would continue to offer hunting opportunities on public lands in this area as part of their management of big game.

3.2 Aquatic Resources

Executive Order 11990: Protection of Wetlands, directs Federal agencies involved in acquiring, managing or exchanging Federal lands to minimize destruction, loss or, degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

Identified aquatic management indicator species (MIS) for the Custer Gallatin National Forest are: native trout. Regulations at 36 CFR 219.19(a)(1) require that certain vertebrate and/or invertebrate species present in the area be identified as MIS within the planning area (Custer Gallatin National Forest) and that these species be monitored, as “their population changes are believed to indicate the effects of management activities”. Monitoring of MIS and determinations of population change occurs at the forest planning level. Table 2 is a summary of current trends for MIS found within the Custer Gallatin National Forest.

Table 2. Summary of population monitoring of MIS wild trout for the Custer Gallatin National Forest.

Species	Monitoring Report Conclusions
Wild Trout	Wild trout are generally common or abundant in suitable habitat on the Custer Gallatin National Forest. Across the Forest, populations of brook, brown, and rainbow trout are stable or increasing overall (Barndt 2011). Conservation efforts to improve and secure aquatic habitat for native Yellowstone Cutthroat in the upper Yellowstone River Basin have resulted in increased abundance in many streams. According to Barndt (2011) cutthroat are common or abundant in over 2/3 of occupied habitat on the Forest.

Federal Lands

In total there are 8.8 miles of perennial stream on the Federal parcels proposed for exchange. Half of these stream miles (4.4 miles) occur on lands proposed for conveyance to CMR on Rock Creek and Middle Fork Rock Creek. Federal lands proposed for conveyance to the RCR include 2.7 stream miles on Little Rock Creek, West Fork Duck Creek, and East Fork Duck Creek. Finally, there are 1.7 stream miles on Little Timber Creek proposed for exchange to the WEMR. The estimated total wetland acreage within the Federal parcels is 1.4 acres.

The Yellowstone cutthroat trout, (*Onchorynchus clarkii bouvieri*) (YCT) is considered a Species of Special Concern by the MFWP and a Sensitive Species by the Region 1 of the U.S. Forest Service. There are a total of 1.4 miles of occupied YCT habitat on Federal lands proposed for conveyance to private (Figure 3). About one mile of main stem Rock Creek (79% of all YCT habitat on Federal parcels) occurs on lower elevation land proposed for conveyance to CMR. There is 0.3 mile of occupied YCT habitat on Little Timber Creek proposed for conveyance to WEMR.

There are no documented western toad (*Bufo boreas*) observations in the South Half of the Crazy Mountain Range which includes the project area. However, there are a total of 1.56 acres of freshwater emergent, freshwater pond, and riparian emergent wetland habitat on Federal parcels proposed for exchange that may provide suitable breeding habitat for western toads, a Forest Service Sensitive Species.

Non-Federal Lands

There are a total of 6.1 perennial stream miles on lands proposed for conveyance to the United States. Of these, 41% (2.5 stream miles) occur on CMR lands and are comprised of high elevation segments of Rock Creek, Smeller Creek, and Sheep Creek. This includes 0.8 mile of marginal YCT habitat on upper Sheep Creek and 0.2 mile of marginal YCT habitat on upper Rock Creek. Habitat is considered marginal for YCT due to steep gradient cascades and falls that fragment habitat. RCR lands proposed for conveyance include 1.8 mid-elevation stream miles on Little Cottonwood Creek and Sheep Creek. This includes 0.6 mile of YCT habitat on Sheep Creek.

Finally, there are 1.8 moderate-to-high elevation stream miles on West Fork Duck Creek proposed for conveyance to the United States from the WEMR. This stream segment does not support YCT. The estimated total wetland acreage within the non-Federal parcel is 10.4 acres.

As with the current Federal lands there are no documented west toad observations. There are a total of 11.44 acres of freshwater emergent, freshwater pond, and riparian emergent wetland habitat that may provide suitable breeding habitat for western toads.

Effects of Alternative A- No Action

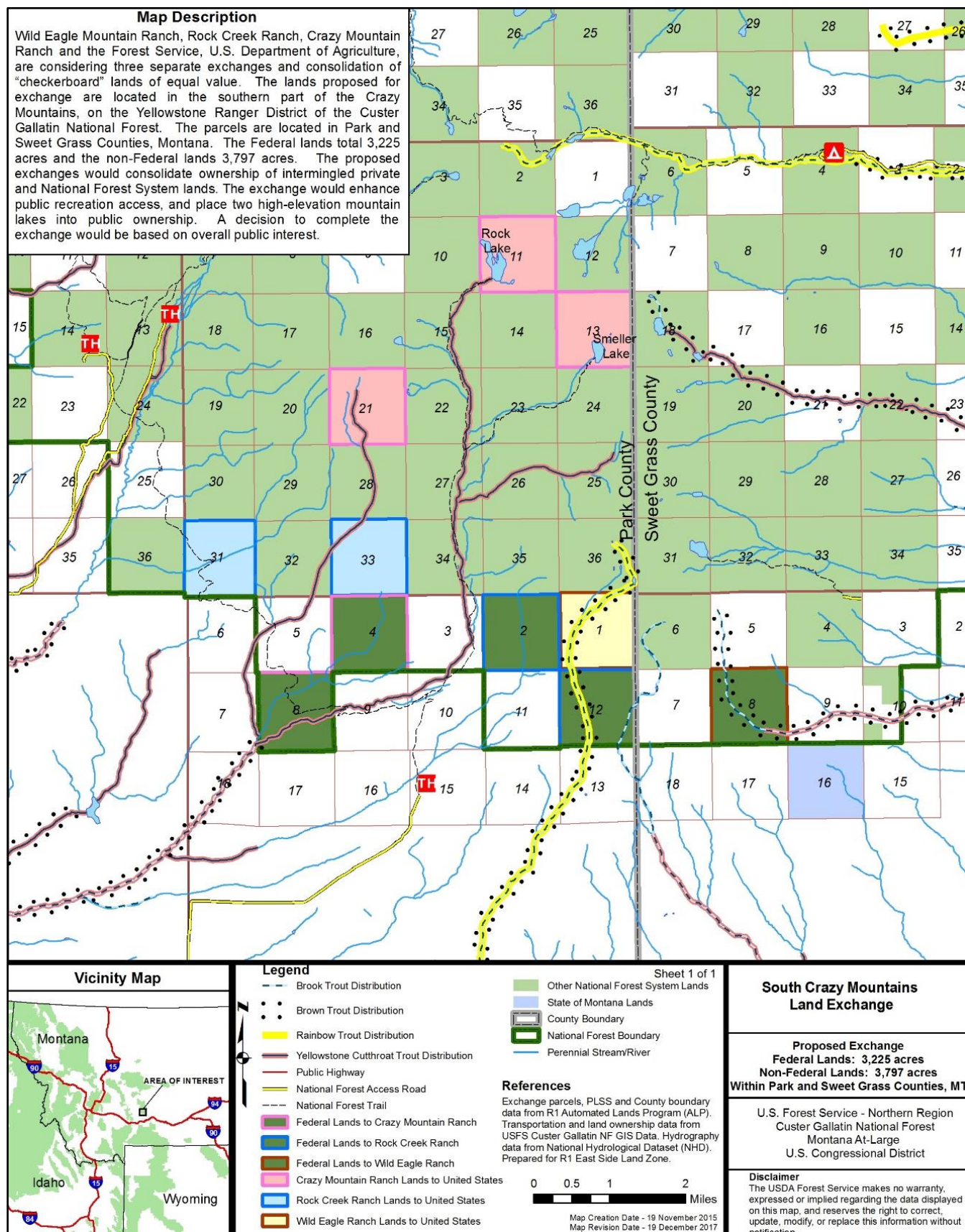
There would be no change to the amount of floodplains or wetland acres given management protections by the Forest Service. The no action alternative would maintain existing YCT and western toad habitat and population status and would result in *No Impact* over existing conditions. Alternative A would have no effect on the viability of aquatic MIS.

Effects of Alternative B- Proposed Action

There would be an increase in the total amount of acres identified as floodplains or wetlands given management protections by the Forest Service, through a voluntary conservation easement. The total non-Federal floodplain/wetland (10.4 acres) exceed the total floodplain/wetland area of the Federal parcel (1.4 acres). Alternative B is in compliance with Executive Order 11988 which requires that in land exchanges the value of wetlands in the acquired tracts must be at least equal to the wetland values in the conveyed tracts.

The voluntary conservation easement would restrict activities in floodplains, wetlands, and riparian areas that have potential to affect aquatic habitat. The conservation easement would adequately protect the riparian and floodplain areas to be conveyed to private ownership, and effectively mitigate potential effects of land management activities in floodplain and riparian zones. The conservation easement would protect riparian vegetation-dependent values such as large woody debris recruitment to stream channels, stream shading, and bank stability by restricting land management actions in riparian areas. In this way potential future habitat and population management actions on the Federal lands to be conveyed will be preserved. With the proposed conservation easement, *No Impact* to YCT or western toad habitats or populations are anticipated. Alternative B will have no effect on the viability of aquatic MIS.

Figure 4. Fish species distribution within parcels proposed for exchange.



3.3 Wildlife Resources

There are numerous important wildlife species that utilize both of the areas proposed for exchange, either directly or indirectly. Table 3 provides a list of federally listed, proposed wildlife species, and Regional Forester sensitive species that are known or have potential to exist and/or utilize either the Federal or non-Federal lands. Table 3 also summarizes the effects determination for these wildlife species for the Alternative B- Proposed Action.

Table 3. Effects determinations for the proposed land exchange for federally listed, proposed for listing, and Regional Forester sensitive species having potential to occur within the lands proposed for exchange.

Species	Status	Proposed Land Exchange Determinations
Wolverine <i>Gulo gulo luscus</i>	Proposed Threatened	May affect, would not jeopardize the Distinct Population Segment of the Northern American wolverine
Canada lynx <i>Lynx Canadensis</i>	Threatened	May affect, not likely to adversely affect
Canada lynx Critical Habitat	Designated	No effect
Bald Eagle <i>Haliaeetus leucocephalus</i>	Regional Forester Sensitive Species	May impact individuals or habitat but will not lead to a trend towards federal listing or cause a loss of viability to the population or species
Black-Backed Woodpecker <i>Picoides arcticus</i>	Regional Forester Sensitive Species	May impact individuals or habitat but will not lead to a trend towards federal listing or cause a loss of viability to the population or species
Gray wolf <i>Canis lupus</i>	Regional Forester Sensitive Species	May impact individuals or habitat but will not lead to a trend towards federal listing or cause a loss of viability to the population or species
Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	Regional Forester Sensitive Species	May impact individuals or habitat but will not lead to a trend towards federal listing or cause a loss of viability to the population or species
Trumpeter Swan <i>Cygnus buccinator</i>	Regional Forester Sensitive Species	May impact individuals or habitat but will not lead to a trend towards federal listing or cause a loss of viability to the population or species

North American Wolverine

The direct, indirect, and cumulative effects analysis area boundary is at the Distinct Population Segment scale (landscape). Neither the land exchange nor the trail reroute are considered threats to the wolverine (USDI Fish and Wildlife Service 2013). The land exchange would result in a net increase in wolverine primary and maternal habitat. The trail reroute would not modify primary or maternal habitat but may affect dispersal habitat on up to nine acres, which is insignificant at the distinct population segment scale. The conservation easement would continue to provide for traditional land uses including recreation, livestock grazing, and timber management but would preclude all mineral development and mining (hard rock and oil/gas), and residential, industrial, or commercial development, except for one new recreation cabin. A majority of these acres are anticipated to retain wolverine habitat values. When added to ongoing activities including recreation, livestock grazing, and timber management, there are no cumulative effects to wolverine under Alternative B.

Canada Lynx

The direct, indirect, and cumulative effects analysis boundary for Canada lynx is at the Lynx Analysis Unit (LAU) scale (Interagency Lynx Biology Team 2013). The Federal lands are primarily in the West Crazies LAU; one section is in the East Crazies LAU. The non-Federal lands are all within the West Crazies LAU. Approximately 2,188 acres of potential lynx habitat

on Federal lands would be exchanged with 1,317 acres of potential lynx habitat on non-Federal lands. This would be an insignificant (approximately 1%) loss of potential lynx habitat in the West Crazies and East Crazies Lynx Analysis Units. The trail reroute is in the West Crazies LAU. Up to eight acres of potential lynx habitat including three acres of multistory habitat may be modified, which is an insignificant modification of lynx habitat in the LAU (0.02%).

Acquisition of T. 3 N., R. 11 E., Section 31 would benefit lynx because it includes the northern portion of a lynx linkage area, thereby improving habitat connectivity. Alternative B would also benefit lynx by improving consolidation of Federal lands in the Crazy Mountain IRA, thereby reducing habitat fragmentation in the LAU and IRA. The conservation easement on 1,317 acres would continue to provide for traditional land uses including recreation, livestock grazing, and timber management but would preclude all mineral development and mining (hard rock and oil/gas), and residential, industrial, or commercial development, except for one new recreation cabin. The standards and guidelines under the Northern Rockies Lynx Management Direction (USDA Forest Service 2007a and 2007b) would be met on a majority of these acres.

When added to ongoing and reasonably foreseeable activities including recreation, livestock grazing, and timber management, cumulative effects to Canada lynx from Alternative B are negligible.

Management Indicator Species

Regulations at 36 CFR 219.19(a)(1) require that certain vertebrate and/or invertebrate species present in the area be identified as Management Indicator Species (MIS) in the planning area (Gallatin NF Forest Plan) and that these species be monitored, as “their population changes are believed to indicate the effects of management activities.” Monitoring of MIS and determinations of population change occur at the forest planning level. The MIS for the Gallatin NF are: bald eagle, grizzly bear, elk, Northern goshawk, and pine marten. Table 4 summarizes current trends for MIS and effects determinations for Alternative B- Proposed Action.

Table 4. Summary findings of MIS as reported in Canfield (2016) and effects of the proposed land exchange, on MIS.

Species	2016 Monitoring Report Conclusions and Effects of Proposed Land Exchange
Bald Eagle	<p>Populations of bald eagles have increased state-wide and on the Gallatin National Forest. The effects of management activities on the Gallatin National Forest have been effectively mitigated through nest management plans that limit vegetation alteration and human disturbances.</p> <p>Bald eagles have been observed several miles north of the project area. There are no known occurrences or nests on the lands proposed for exchange; however, no surveys have been conducted. No habitat occurs on the trail reroute. There would be a net increase in potential habitat. The conservation easement would retain habitat values on a majority of the acres to be exchanged.</p>
Grizzly Bear	<p>Management activities on the Gallatin National Forest have increased secure habitat for grizzly bears, which may be contributing to the increasing occupation and populations of grizzly bears on the Gallatin National Forest outside of the recovery zone.</p> <p>The project occurs outside of the Greater Yellowstone Ecosystem Recovery Zone and outside of the Conservation Management Strategy Area. However, potential habitat including modeled denning habitat and secure habitat occur in the Crazy Mountain Bear Analysis Unit (BAU) which overlaps the project area. Grizzly bears are not known to occur in the project area but could occupy it in the future.</p> <p>Alternative B will consolidate Federal land ownership in the Crazy Mountain Inventoried Roadless Area and result in a net increase of secure habitat and a net increase of whitebark pine in the Crazy Mountain BAU which would benefit grizzly bears.</p>
Elk	<p>Elk populations are managed by MTFW to include a harvestable surplus, but to be sensitive to the tolerances of private landowners as well. MTFWP adjustments to harvest quotas are made to try and</p>

Species	2016 Monitoring Report Conclusions and Effects of Proposed Land Exchange
	<p>stay within an agreed upon population level for each Elk Management Unit. These populations are influenced by multiple variables, but generally not by a lack of habitat. Habitat on the Gallatin National Forest includes many areas with high security (low road density) and abundant hiding cover. High quality foraging habitat appears to be very limited and management actions that create such habitat (prescribed burning, timber harvest) designed collaboratively with MTFWP could benefit elk and perhaps result in more elk available on public lands for wildlife viewing and hunting.</p> <p>The proposed trail does not reduce secure habitat because the trail is non-motorized. Six miles of trail reroute construction may temporarily displace individual elk due to project implementation activities. Human recreational presence after the trail has been completed may result in some displacement from suitable habitat to individuals; effects to elk at the population level due to the trail reroute would be insignificant. Effects to potential foraging habitat or hiding cover on nine acres would be insignificant at the elk analysis unit scale (subwatershed). There are no effects to elk winter range as none occurs in the lands proposed for exchange. There would be a net increase in potential habitat with the land exchange. The conservation easement would retain habitat values on a majority of the acres to be exchanged.</p>
Goshawk	<p>Globally, northern goshawks are well distributed and stable at the broadest scale. Based on broad-scale habitat and inventory and monitoring assessments conducted in Region 1 since 2005, breeding goshawks and associated habitats appear widely distributed and relatively abundant on National Forest lands. Based on a detection surveys, goshawks are present and well distributed across the Gallatin National Forest, with more goshawks nesting on the Yellowstone Ranger District compared to other ranger districts. Goshawk populations appear to be stable. Compared to natural events that have or could affect goshawk habitat, project level management activities on the Gallatin National Forest are relatively inconsequential.</p> <p>Suitable goshawk habitat exists in the project area occurs and goshawks may be present. No surveys have been conducted. Potential habitat for northern goshawk is mixed conifer. The land exchange trail construction reroute would modify up to nine acres of potential habitat, which is insignificant. If trail construction activities are conducted during spring, impacts to individual nesting goshawks could occur. There would be a net increase in potential habitat. The conservation easement would retain habitat values on a majority of the acres to be exchanged.</p>
Marten	<p>Although this species was selected as a MIS and is being monitored accordingly, there are many other factors influencing populations besides habitat change. Because it is a harvested furbearer, fur market prices, accessibility to populations by humans, and other factors related to trapping may be the most important population level determinants. Timber harvest has had a minor influence on pine marten habitat availability on the Gallatin National Forest. The 2006 travel plan decision may have had an indirect effect to reduce effective trapping pressure by reducing motorized access in some areas.</p> <p>Potential habitat for the pine marten exists in the project area and occupancy is assumed. The trail construction reroute would modify an insignificant number of acres of potential habitat up to nine acres of potential habitat. There would be a net increase in potential habitat. The conservation easement would retain habitat values on a majority of the acres to be exchanged.</p>

Migratory Birds

Migratory birds include raptors, waterfowl, shore birds, upland game birds and songbirds. Migratory bird species are protected under the International Migratory Bird Treaty Act of 1918. Executive Order 13186 requires agencies to ensure that environmental analyses evaluate the effects of federal actions and agency plans on migratory birds, with emphasis on species of concern. The online Montana Natural Heritage Database (Montana Natural Heritage Program 2019, accessed July 15, 2019), 2016 Birds of Conservation Concern (USDI Fish and Wildlife Service 2016), and the online iPaC Resource (USDI Fish and Wildlife Service 2019, accessed July 15, 2019) were used to identify avian species of concern.

If trail construction activities occur during the spring reproductive period (approximately April through mid to late July), injury, mortality, and/or reduced reproductive output due to tree falling and noise disturbance from heavy machinery, may occur. Minor displacement from foraging habitat may occur when activities occur in summer and fall. These effects are short-term and localized, and would not affect migratory birds at a population level scale.

Alternative B has a net benefit on migratory birds, due to the conservation easement that will minimize permanent loss of habitat, resulting in a net increase in potential habitat. The conservation easement would retain habitat values on a majority of the acres. When added to ongoing and reasonably foreseeable activities including recreation, livestock grazing, and timber management, cumulative effects to migratory birds at the population level are negligible.

3.4 Range

The proposed land exchange area encompasses five grazing allotments on the Yellowstone Ranger District: Little Cottonwood, Middle Fork Rock Creek, Rock Creek North, Duck Creek and Little Timber and includes approximately four sections of land outside of grazing allotments and two sections within the Little Cottonwood Allotment. Combined, these allotments consist of approximately 12,020 acres (8,698 acres NFS lands and 3,322 acres private lands). Figure 5 displays the lands proposed for exchange and effected allotments.

Federal Lands

Little Cottonwood Allotment

This allotment contains 4,054 acres (3,174 acres NFS lands and 880 acres private lands) within seven sections including two private sections (Sections 31 and 33, within T.3N., R.11E. owned by the RCR). These two private sections are identified for exchange, are fenced and have no public access. The sections that border Sections 31 and 33 within the allotment are not accessible to the existing permittee due to the fences and limited private land access. This leaves one section (section 36, T.8 N., R.10E.) within the grazing allotment that is accessible to the existing permittee. There is one term grazing permit for 60 cow/calf pairs for three and one-half months. There are no specific rotations for this allotment. Currently there is one water tank that is maintained by the permittee.

Middle Fork Rock Creek Allotment

This allotment contains 1,305 acres of NFS lands. There is one active term grazing permit for 23 cow/calf pairs for a three month period (between June 15 and October 1). In 2015, the term grazing permit for 60 cow/calf pairs was waived back to the Forest Service. Since then, a Temporary Grazing Permit has been issued for 30 cow/calf pairs for three months. This allotment is utilized as a two-pasture deferred grazing rotation³. Access to this allotment is through an agreement with the CMR. CMR has accommodated the permittee's access requests every year. Currently there are two improvements on this allotment that are maintained by the permit holders. One is a non-functioning water tank and the other is 0.2 mile of fence on the northwest corner of Section 4, T 2 N., R 11 E.

Rock Creek North Allotment

This allotment contains 1,572 acres (1,370 acres NFS lands and 202 acres private lands). There is one term grazing permit for 25 cow/calf pairs for a two month period between July 1 and September 30. The allotment has one pasture that is utilized under a 5 year rest rotation⁴. There are no improvements associated with this allotment, existing fences along the boundary of the allotment are private land maintenance responsibility. Access to this allotment is through agreements with private land owners. The private land owners have accommodated the permittee's access requests every year.

³ Deferred rotation system allows for plant recovery by altering turn on dates. The permittee will turn on early one year and late the next year.

⁴ Rest Rotation/Deferred grazing system allows for plant recovery by altering turn on dates as well as allowing the pasture a full year of rest for the plants to recover.

Duck Creek Allotment

This allotment contains 2,870 acres (1,740 acres NFS lands and 1,130 acres private lands). There is one term on/off grazing permit⁵ issued for 10 cow/calf pairs for a three month period (between June 15 and October 30). This permit also allows for 500 head on a natural unit, with 2% of it being suitable NFS lands and a capacity of 30 head months. This allotment is utilized under a deferred grazing rotation in conjunction with the private land pasture rotations.

Little Timber Allotment

This allotment contains 2,308 acres (996 acres NFS lands and 1,312 acres private lands). There is one term on/off grazing permit issued for 25 cow/calf pairs for a one month period (between July 1 and October 1). This permit also allows for 200 cow/calf pairs on a natural unit, with 13% of it being suitable NFS lands and a capacity of 25 head months. There are no specific rotations for this allotment. Currently there is one fence that is jointly maintained by adjacent permittees.

Non-Federal Lands

CMR lands

Per conversations with the ranch manager (2013/2014) section 11, 13 and 21, T.3 N., R.11 E. are considered unsuitable for livestock grazing, due to topography/vegetation type and currently have no existing grazing agreements.

RCR lands

Sections 31 and 33, T.3 N., R.11 E. are within the Little Cottonwood Allotment and are described in the Little Cottonwood Allotment above. Per conversations with ranch manager (2013), the RCR does not have access to these sections and has reports of trespass livestock every year.

WEMR lands

Per conversations with the ranch manager (2013), Section 1, T.2 N., R.11 E. has very little suitable grazing along the West Fork Creek. The remainder of the area is considered unsuitable for livestock grazing and there are no existing grazing agreements.

Effects of Alternative A- No Action

The private landowners would continue to own and manage grazing on the non-Federal lands and the Forest Service would continue to manage the grazing permittee associated with the Federal lands, in accordance with regulation, policy, and law.

Effects of Alternative B- Proposed Action

All the allotments listed above would be affected by the proposed land exchange. Some permits may be cancelled in whole or part due to devoting lands to another public purpose (FSM 2240, Section 16.6- Cancellation to Devote lands to another Public Purpose). Permits that are to be cancelled need to be notified two-years in advance. Permit holders may select to waive the two-year notice requirements if they so choose.

Suitable capable lands that are added to the NFS may be made available for grazing, in the future.

⁵ Term On/Off Grazing Permit is one issued to a qualified candidate when a logical grazing area contains both Forest controlled and private lands. This type of permit is usually issued when a minor portion of the logical grazing area, normally less than 1/3 is controlled by the Forest Service.

This determination would be made by an authorized officer through a process that will involve compliance with the National Environmental Policy Act (NEPA), Forest Plan, Endangered Species Act, National Historic Preservation Act, consultation with affected Tribes, and other relevant laws, regulations and policies.

Little Cottonwood Allotment

Sections 31 and 33 would be added to the NFS making this allotment entirely NFS lands consisting of approximately 4,054 acres. Of these acres, 979 acres could be determined suitable for livestock grazing and 3,075 acres could be determined unsuitable for livestock grazing due to topography/vegetation. This allotment does not have a sufficient NEPA analysis; until there is a decision, the existing permit would not change.

Middle Fork Rock Creek Allotment

The Middle Fork Rock Creek grazing permit would be canceled. The affected permittee has been notified, starting their two year notice requirement on August 20, 2019. Compensation for the water development in Section 4, T.2 N., R.11 E. would be void as the permittee no longer holds a grazing permit and the Forest Service owns the water development.

Rock Creek North Allotment

The 202 acres of private land in Section 33, would become NFS, making this allotment entirely NFS lands. Of these total acres, 200 acres could be determined suitable for livestock grazing and 1,372 acres could be determined unsuitable for livestock grazing due to topography/vegetation. The existing permit would not change due to the land exchange.

Duck Creek Allotment

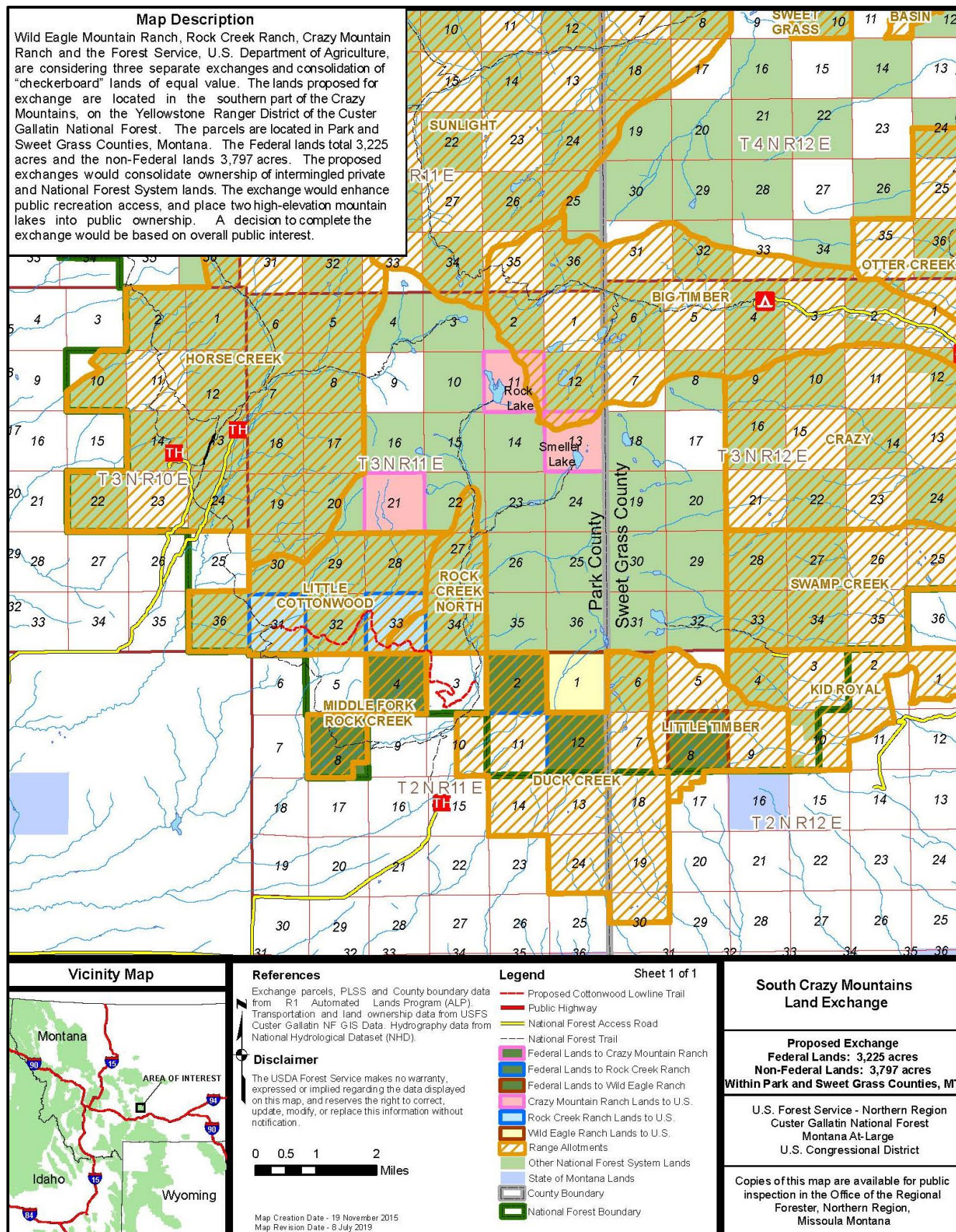
This allotment would become entirely private land. The term on/off grazing permit would be canceled. The affected permittee has been notified, starting there two year notice requirement on August 20, 2019.

Little Timber Allotment

This allotment would become entirely private land and the grazing permit would be canceled. The affected permittee has been notified, starting the two year notice requirement on August 20, 2019.

The CMR, RCR, and WEMR lands involved in the exchange would be managed by the Forest Service. Since the CMR lands contain no grazing value, these lands are unlikely to have future authorized grazing permits. The existing permit on the RCR would not change and would be administered in accordance with the terms and conditions of that permit. The WEMR lands contain little grazing value and it is unlikely there will be future authorized grazing permits issued for this area.

Figure 5. Lands proposed for exchange and effected allotments.



3.5 Inventoried Roadless Areas

The 2001 Roadless Rule established prohibitions on road construction, road reconstruction, and timber harvesting on 58.5 million acres of inventoried roadless areas (IRA) on NFS lands. The intent of the 2001 Roadless Rule is to provide lasting protection for inventoried roadless areas within the NFS in the context of multiple-use management. The final environmental impact statement for the 2001 Roadless Rule stated that, “For lands acquired through exchange, Forest Service regulation states that those lands within areas having an administrative designation set through the land management planning process, shall automatically become part of the area within which they are located, and shall be managed in accordance with the laws, regulations, and land management plans applicable to the area (36 CFR 254.3(f)).”

Federal Lands

One-thousand twenty acres of the proposed Federal land for exchange are designated within the Crazy Mountain IRA (Figure 6):

- Township 2N., Range 11E., Sections 2 and 12
- Township 2N., Range 12E., Section 8

Non-Federal Lands

Due to mapping technologies at the time of the 2001 Roadless Rule, errors can be found nationwide. Specifically, T.3 N., R.11 E, Section 11, which is currently owned by CMR and shown as inventoried roadless (Figure 6). The USDA Forest Service has no jurisdiction to designate private lands as IRA. This is considered a mapping error.

Effects of Alternative A- No Action

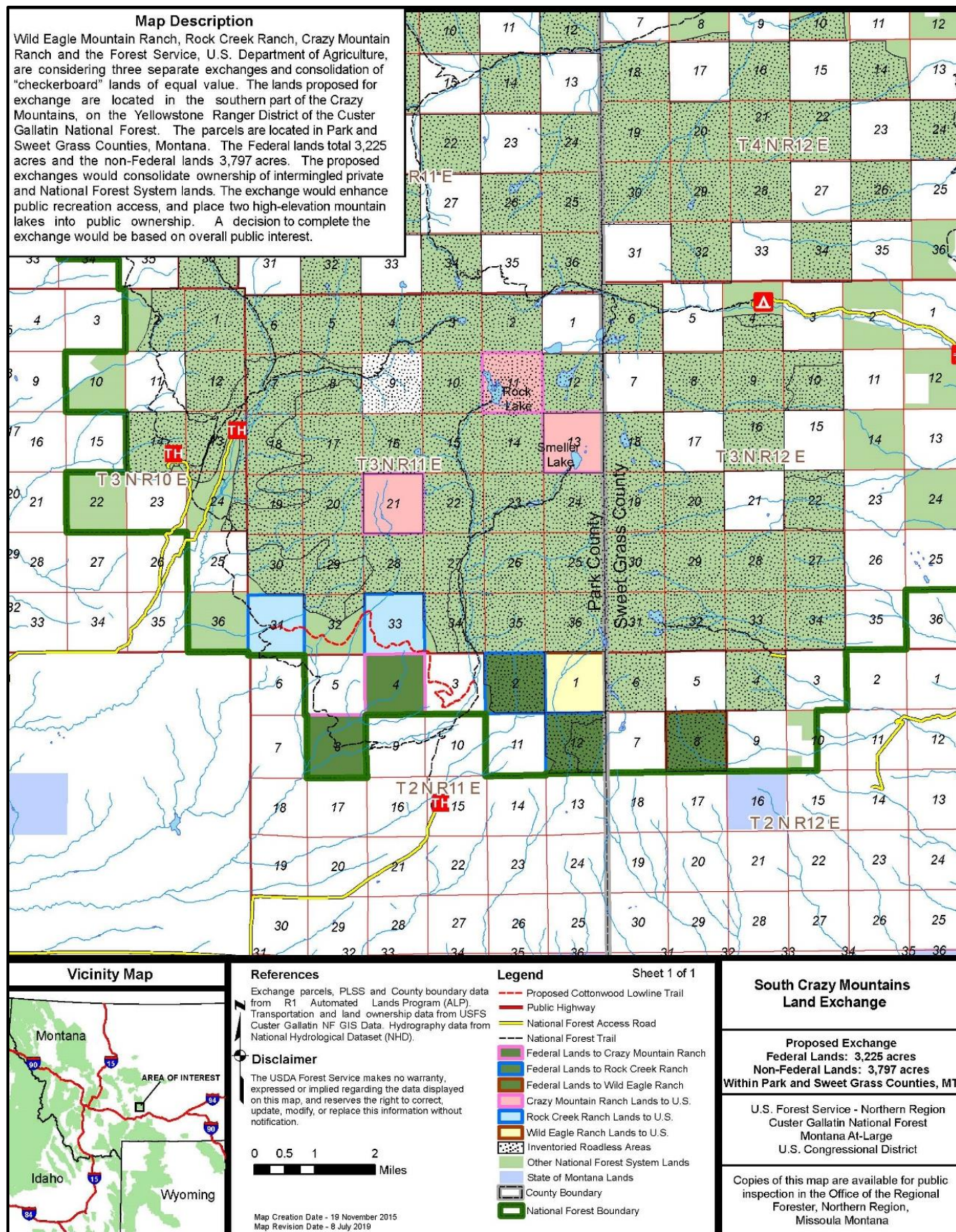
There would be no changes to IRA designations within NFS lands. The private inholdings would continue to be available for private use and development.

Effects of Alternative B: Proposed Action

Lands identified for exchange located in T. 3 N., R. 11 E., Sections 13 and 21 (CMR lands) as well as, T. 2 N., R. 11 E., Section 1 (WEMR lands) (Figure 7) would all be designated as Semi-Primitive Non-motorized (SPNM). SPNM lands are managed for non-motorized use. Uses include hiking and equestrian trails, mountain bikes and other non-motor mechanized equipment. These lands would also be identified as unsuitable for timber harvest.

The designation of SPNM and the unsuitability for timber harvest would continue to protect the Crazy Mountain IRA as a whole and would be keeping with the intent of the 2001 Roadless Rule. Therefore, effects to IRA locally and nationally would be negligible. The consolidation of the interior sections would eliminate the possibility of future development of those sections thereby improving the roadless character.

Figure 6. Designed inventoried roadless areas and lands proposed for exchange.



3.6 Wilderness

No lands included within this proposal are within designated Wilderness or within any Wilderness Study area boundaries. There will be no direct, indirect or cumulative effects to designated Wilderness or Wilderness Study areas, for either alternative.

3.7 Cultural Resources

In a preliminary file review, no cultural or archeological resources were identified on or near the lands proposed for exchange. There would be no direct, indirect, or cumulative effects to cultural or archeological resources, for either alternative. Prior to implementation of the proposed exchange, survey work and concurrence with the Montana State Historic Preservation Office would be completed.

3.8 Botanical Resources

There are numerous important botanical species that utilize both the Federal lands and the non-Federal lands proposed for exchange. Table 5 provides a list of the Forest Service sensitive botanical species that, based on elevation range and habitat type, have potential to occurrence within the project area. Table 5 also summarizes the direct/indirect effects determination for these Forest Service sensitive botanical species for Alternative B- Proposed Action.

Table 5. Effects determinations for the proposed land exchange for Regional Forester sensitive species having potential to occur within the lands proposed for exchange.

Species	Status	Proposed Land Exchange Determinations
White Bark Pine	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
Northern Rattlesnake Plantain	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
Hell's Rush	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
Austin's Knotweed	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
Shoshonea	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
False Hellebore	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
Large-leaved Balsmaroot	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing
Small Lady Slipper	Regional Forester Sensitive Species	May impact habitat or individuals, but would not lead to a trend toward federal listing

No Endangered Species Act listed botanical species are found within the Custer Gallatin National Forest, including this project area.

Based on the current and possible future uses of the Federal and non-Federal lands there is a possibility that, under both alternatives, individuals or habitat could be impacted by factors not relating to this land exchange. The level of possible impact is lessened with Alternative B- Proposed Action, due to the decrease in grazing and the conservation easements.

3.9 Geology and Minerals

The Bureau of Land Management Manual 3060.11 requires that all non-Federal and Federal lands identified for acquisition or conveyance by the United States have a mineral assessment documented in a mineral report. The mineral report documents the estimated value of the mineral potential of the Federal land, evaluates surface uses that would interfere with potential development of the mineral estate, and recommend action that should be taken toward disposal or retention of the Federal mineral estate. The Minerals Report can be found in the project record.

Federal Lands

A review of Federal mineral and land status records found no reference to active mining claims, leases, reservations, or other mineral related encumbrances on the Federal parcels. The mineral estate of the Federal parcels are intact and carry public domain status.

The Federal lands proposed for transfer to the landowners to have *minimal (low) potential* for the discovery of an economically viable mineral deposit of any kind. The assessment of mineral potential is based on a field investigation, a review of the federal minerals database, historical records, and applicable geologic literature. Lack of past mineral interest and unfavorable geology are the principal determinants for this *Low* potential rating. Accordingly, there is also a *Low* potential for occurrence for all locatable, leasable, and saleable resources. The level of certainty for all resource evaluations can be assigned a Certainty Level of “C”, corresponding to there being a minimum of quantitative direct evidence such as past mining or exploration activity to support such a designation.

Non-Federal Lands

A review of the non-Federal mineral and land status records identified three land parcels with outstanding mineral rights, with ownership that is fractionalized among many owners. Those parcels are sections 11 and 13, T. 3 N., R. 11 E., and section 1, T. 2 N., R. 11 E. On the remaining parcels, 100% of the mineral estate would transfer to Federal ownership without reservations.

The non-Federal lands proposed for conveyance to the Federal government have a *minimal (low) potential* for the discovery of an economically viable mineral deposit for all commodities other than for a geothermal resource. The assessment of mineral potential is based on a field investigation, a review of the Federal minerals database, historical records, and applicable geologic literature. Lack of past mineral interest and unfavorable geology are the principal determinants for this *Low* potential rating. Accordingly, there is also a *Low* potential for occurrence for all locatable, leasable, and saleable resources. The level of certainty for all resource evaluations can be assigned a Certainty Level of “C”, corresponding to there being a minimum of quantitative direct evidence such as past mining or exploration activity to support such a designation.

Effects of Alternative A- No Action

The landowners and outstanding mineral owners would continue to own all locatable (hardrock) and leasable (coal, oil and gas, etc.), and mineral materials (sand and gravel) minerals associated with the non-Federal lands and the United States would continue to hold all minerals associated with the Federal lands.

Effects of Alternative B- Proposed Action

Mineral Authorities

Under the General Exchange Act of March 20, 1922, when the United States conveys reserved public domain status land, then the land the United States acquires, in that same transaction, will also

have reserved public domain status and are therefore subject to entry under the general mining laws. These lands will also be subject to the Mineral Leasing Act of February 25, 1920, as amended.

For those lands where all or part of the minerals estate does not transfer to Federal ownership, the Forest Service has no authority over the disposition of the mineral estate or the authority to deny the exercise of an outstanding mineral right. The Forest Service's approach in managing a Federal surface estate with outstanding minerals rights is to allow as much surface use as is reasonably necessary to explore, develop, and transport materials in the pursuit of mineral exploration and development.

Management of Lands with Mineral Estate Intact

The non-Federal parcels in sections 21, 31 and 33, T. 3 N., R. 11 E., have intact mineral estates and will transfer with the land, to the United States, as lands with reserved public domain status. These lands will be open to mineral entry under the general mining laws and the Mineral Leasing Act of February 25, 1920, as amended.

The preferred uses for the land management areas surrounding the subject lands as described in the Forest Plan, emphasize dispersed recreation and livestock grazing. These uses do not conflict with mineral activities. For lands with the mineral estate intact, the Forest Service would manage the subject lands with these end uses in mind. The scale and scope of any future mineral related activities or other surface use for the non-Federal lands would be reviewed and acted on in a manner that would accommodate the stated management objectives of the surrounding areas as described in the Forest Plan. The lands coming into Federal ownership will have reserved public domain status and would be open to mineral entry.

Management of Lands with Outstanding Mineral Rights

For those parcels with outstanding mineral rights, the Forest Service would manage the surface estate consistent with the management goals and objectives outlined in the Forest Plan for adjacent Federal lands. There is potential for conflict between the Forest Service and its management of these lands, and the holders of the mineral rights should they choose to exercise their right to explore and develop a mineral resource. Accommodation of mineral activity on lands with outstanding rights would be managed by allowing only as much surface disturbance as is reasonably necessary and incidental to the execution of the activities described in a minerals plan of operations (Forest Service Manual 2832). This is very similar to how the Forest Service manages mineral activities on public domain lands. Although the lands with outstanding mineral rights pose a potential surface management challenge. However, the likelihood is low for mineral development or even mineral exploration on these lands. It is unlikely the acquisition of the subject lands with outstanding mineral rights will present future conflict with current Federal land management objectives.

For lands with outstanding mineral rights, there is greater potential for surface management conflict between the Forest Service and the mineral rights holder. Forest Service Manual 2832 provides direction on surface management for split estates. The mineral laws governing surface management of public domain lands address similar management issues. Ultimately the Forest Service will attempt to manage mineral activities in a manner which accommodates owner's rights while adhering to land management goals outlined in the Forest Plan.

Conclusions Regarding Minerals

The following conclusions have been based on the *Mineral Report: Mineral Potential of the Lands Involved in the South Crazy Mountains Land Exchange* (Project Record):

1. The Federal parcels proposed for exchange have limited potential for an economic

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- mineral deposit of locatable, leasable or salable value.
2. The private parcels proposed for exchange have limited potential for an economic mineral deposit of locatable, leasable or salable value.
 3. The subject lands have equal likelihood of mineral discovery.
 4. The subject lands have equal mineral potential.
 5. The subject lands have equal mineral value.
 6. The Forest Service and landowners should make every effort to secure the outstanding mineral rights prior to completion of this land exchange.
 7. If the mineral rights on the lands transferred to the Federal government remain outstanding, there is minimal risk of there being surface management conflicts between the Federal government and the mineral owners due to a low likelihood of mineral occurrence.
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